

## BUF 10.16IT/03/180MSF3SH160 AG BK BX

Weidmüller Interface GmbH &amp; Co. KG

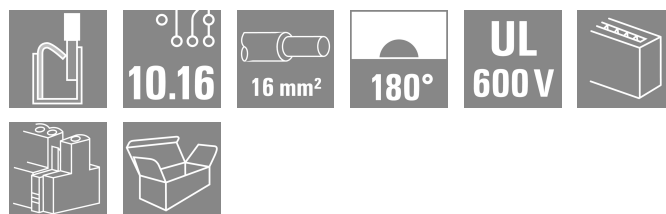
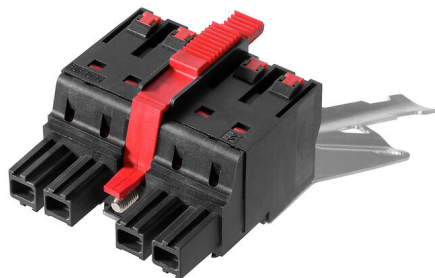
Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Product image



Similar to illustration

Device connectivity | OMNIMATE® Power BUF 10.16  
PUSH IN PCB connector, 16mm<sup>2</sup>, with wire-ready function

- PUSH IN technology with settable wire-ready contact point simplifies the connection of stranded wires without wire-end ferrules and wires with particularly rigid insulation
- Direct and tool-free connection of solid wires and wires with crimped wire-end ferrules for fast and safe wiring
- Single-hand operation of the plug-in connector and automatic connection thanks to the middle flange with snap-on mechanism and optionally with additional screw fastening

Including pre-assembled pluggable shield connection for large area shielding in your application.

Directly during the plug-in process itself, the shield connection is attached vibration-proof to the contact area of the metal housing.

## General ordering data

|                 |                                                                                                                                               |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Version         | PCB plug-in connector, female plug, 10.16 mm, Number of poles: 3, 180°, PUSH IN with actuator, Clamping range, max.: 16 mm <sup>2</sup> , Box |
| Order No.       | <a href="#">2627830000</a>                                                                                                                    |
| Type            | BUF 10.16IT/03/180MSF3SH160 AG BK BX                                                                                                          |
| GTIN (EAN)      | 4050118631821                                                                                                                                 |
| Qty.            | 20 items                                                                                                                                      |
| Product data    | IEC: 1000 V / 76 A / 2.5 - 16 mm <sup>2</sup><br>UL: 600 V / 51 A / AWG 12 - AWG 6                                                            |
| Packaging       | Box                                                                                                                                           |
| Delivery status | Discontinued                                                                                                                                  |

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**Technical data**
**Approvals**

Approvals



UL File Number Search [UL Website](#)

Certificate No. (cURus) E60693

**Dimensions and weights**

|            |          |                 |             |
|------------|----------|-----------------|-------------|
| Depth      | 122.1 mm | Depth (inches)  | 4.8071 inch |
| Height     | 79.1 mm  | Height (inches) | 3.1142 inch |
| Width      | 40.64 mm | Width (inches)  | 1.6 inch    |
| Net weight | 0 g      |                 |             |

**Environmental Product Compliance**

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| RoHS Compliance Status               | Compliant with exemption             |
| RoHS Exemption (if applicable/known) | 6al                                  |
| REACH SVHC                           | Lead 7439-92-1                       |
| SCIP                                 | a9fcc928-8cc3-4126-aede-eb294a2dd7f6 |

**System Parameters**

|                                              |                                     |                                            |                    |
|----------------------------------------------|-------------------------------------|--------------------------------------------|--------------------|
| Product family                               | OMNIMATE Power - series BU/SU 10.16 | Type of connection                         | Field connection   |
| Wire connection method                       | PUSH IN with actuator               | Pitch in mm (P)                            | 10.16 mm           |
| Pitch in inches (P)                          | 0.400 "                             | Conductor outlet direction                 | 180°               |
| Number of poles                              | 3                                   | L1 in mm                                   | 30.48 mm           |
| L1 in inches                                 | 1.200 "                             | Number of rows                             | 1                  |
| Pin series quantity                          | 1                                   | Rated cross-section                        | 16 mm <sup>2</sup> |
| Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch              | Touch-safe protection acc. to DIN VDE 0470 | IP 20              |
| Protection degree                            | IP20                                | Can be coded                               | Yes                |
| Stripping length                             | 18 mm                               | Tightening torque for screw flange, min.   | 0.3 Nm             |
| Tightening torque for screw flange, max.     | 0.4 Nm                              | Screwdriver blade                          | 0.8 x 4.0          |
| Screwdriver blade standard                   | DIN 5264                            | Plugging cycles                            | 25                 |
| Plugging force/pole, max.                    | 15 N                                | Pulling force/pole, max.                   | 15 N               |

**Material data**

|                                |                     |                                  |           |
|--------------------------------|---------------------|----------------------------------|-----------|
| Insulating material            | PA GF               | Colour                           | black     |
| Colour of operational elements | red, grey           | Colour chart (similar)           | RAL 9011  |
| Insulating material group      | II                  | Comparative Tracking Index (CTI) | ≥ 400     |
| Insulation resistance          | ≥ 10 <sup>8</sup> Ω | Moisture Level (MSL)             |           |
| UL 94 flammability rating      | V-0                 | Contact material                 | Cu-alloy  |
| Contact surface                | silver-plated       | Layer structure of plug contact  | ≥ 3 µm Ag |
| Storage temperature, min.      | -40 °C              | Storage temperature, max.        | 70 °C     |
| Operating temperature, min.    | -50 °C              | Operating temperature, max.      | 120 °C    |

**Conductors suitable for connection**

|                                         |                     |
|-----------------------------------------|---------------------|
| Clamping range, min.                    | 2.5 mm <sup>2</sup> |
| Clamping range, max.                    | 16 mm <sup>2</sup>  |
| Wire connection cross section AWG, min. | AWG 12              |
| Wire connection cross section AWG, max. | AWG 4               |

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**Technical data**

|                                                                     |                                        |                                                                                    |                             |
|---------------------------------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------|-----------------------------|
| Solid, min. H05(07) V-U                                             | 2.5 mm <sup>2</sup>                    |                                                                                    |                             |
| Solid, max. H05(07) V-U                                             | 10 mm <sup>2</sup>                     |                                                                                    |                             |
| Stranded, min. H07V-R                                               | 10 mm <sup>2</sup>                     |                                                                                    |                             |
| Stranded, max. H07V-R                                               | 16 mm <sup>2</sup>                     |                                                                                    |                             |
| Flexible, min. H05(07) V-K                                          | 2.5 mm <sup>2</sup>                    |                                                                                    |                             |
| Flexible, max. H05(07) V-K                                          | 16 mm <sup>2</sup>                     |                                                                                    |                             |
| w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm <sup>2</sup> min. |                                        |                                                                                    |                             |
| w. plastic collar ferrule, DIN 46228 pt 4, 16 mm <sup>2</sup> max.  |                                        |                                                                                    |                             |
| w. wire end ferrule, DIN 46228 pt 1, 2.5 mm <sup>2</sup> min.       |                                        |                                                                                    |                             |
| w. wire end ferrule, DIN 46228 pt 1, 16 mm <sup>2</sup> max.        |                                        |                                                                                    |                             |
| Clampable conductor                                                 | Cross-section for conductor connection | Type                                                                               | fine-wired                  |
|                                                                     |                                        | nominal                                                                            | 2.5 mm <sup>2</sup>         |
|                                                                     | wire end ferrule                       | Stripping length                                                                   | nominal 20 mm               |
|                                                                     |                                        | Recommended wire-end ferrule                                                       | <a href="#">H2.5/25D BL</a> |
|                                                                     |                                        | Stripping length                                                                   | nominal 18 mm               |
|                                                                     |                                        | Recommended wire-end ferrule                                                       | <a href="#">H2.5/18</a>     |
|                                                                     | Cross-section for conductor connection | Type                                                                               | fine-wired                  |
|                                                                     |                                        | nominal                                                                            | 4 mm <sup>2</sup>           |
|                                                                     | wire end ferrule                       | Stripping length                                                                   | nominal 20 mm               |
|                                                                     |                                        | Recommended wire-end ferrule                                                       | <a href="#">H4.0/26D GR</a> |
|                                                                     |                                        | Stripping length                                                                   | nominal 18 mm               |
|                                                                     |                                        | Recommended wire-end ferrule                                                       | <a href="#">H4.0/18</a>     |
|                                                                     | Cross-section for conductor connection | Type                                                                               | fine-wired                  |
|                                                                     |                                        | nominal                                                                            | 6 mm <sup>2</sup>           |
|                                                                     | wire end ferrule                       | Stripping length                                                                   | nominal 20 mm               |
|                                                                     |                                        | Recommended wire-end ferrule                                                       | <a href="#">H6.0/26 SW</a>  |
|                                                                     |                                        | Stripping length                                                                   | nominal 18 mm               |
|                                                                     |                                        | Recommended wire-end ferrule                                                       | <a href="#">H6.0/18</a>     |
|                                                                     | Cross-section for conductor connection | Type                                                                               | fine-wired                  |
|                                                                     |                                        | nominal                                                                            | 10 mm <sup>2</sup>          |
|                                                                     | wire end ferrule                       | Stripping length                                                                   | nominal 21 mm               |
|                                                                     |                                        | Recommended wire-end ferrule                                                       | <a href="#">H10.0/28 EB</a> |
|                                                                     |                                        | Stripping length                                                                   | nominal 18 mm               |
|                                                                     |                                        | Recommended wire-end ferrule                                                       | <a href="#">H10.0/18</a>    |
|                                                                     | Cross-section for conductor connection | Type                                                                               | fine-wired                  |
|                                                                     |                                        | nominal                                                                            | 16 mm <sup>2</sup>          |
|                                                                     | wire end ferrule                       | Stripping length                                                                   | nominal 21 mm               |
|                                                                     |                                        | Recommended wire-end ferrule                                                       | <a href="#">H16.0/28 GN</a> |
|                                                                     |                                        | Stripping length                                                                   | nominal 18 mm               |
|                                                                     |                                        | Recommended wire-end ferrule                                                       | <a href="#">H16.0/18</a>    |
| Reference text                                                      |                                        | Length of ferrules is to be chosen depending on the product and the rated voltage. |                             |

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**Technical data**
**Rated data acc. to IEC**

|                                                                       |                  |                                                                           |        |
|-----------------------------------------------------------------------|------------------|---------------------------------------------------------------------------|--------|
| Rated current, min. number of poles (Tu=20°C)                         | 76 A             | Rated current, max. number of poles (Tu=20°C)                             | 71 A   |
| Rated current, min. number of poles (Tu=40°C)                         | 70 A             | Rated current, max. number of poles (Tu=40°C)                             | 62 A   |
| Rated voltage for surge voltage class / pollution degree II/2         | 1000 V           | Rated voltage for surge voltage class / pollution degree III/2            | 1000 V |
| Rated voltage for surge voltage class / pollution degree III/3        | 1000 V           | Rated impulse voltage for surge voltage class/ pollution degree II/2      | 8 kV   |
| Rated impulse voltage for surge voltage class/ pollution degree III/2 | 8 kV             | Rated impulse voltage for surge voltage class/ contamination degree III/3 | 8 kV   |
| Short-time withstand current resistance                               | 3 x 1s with 800A |                                                                           |        |

**Rated data acc. to UL 1059**

|                                       |                                                                        |                                       |        |
|---------------------------------------|------------------------------------------------------------------------|---------------------------------------|--------|
| Institute (cURus)                     | CURUS                                                                  | Certificate No. (cURus)               | E60693 |
| Rated voltage (Use group B / UL 1059) | 600 V                                                                  | Rated voltage (Use group C / UL 1059) | 600 V  |
| Rated current (Use group B / UL 1059) | 51 A                                                                   | Rated current (Use group C / UL 1059) | 51 A   |
| Wire cross-section, AWG, min.         | AWG 12                                                                 | Wire cross-section, AWG, max.         | AWG 6  |
| Reference to approval values          | Specifications are maximum values, details - see approval certificate. |                                       |        |

**Packing**

|           |           |            |           |
|-----------|-----------|------------|-----------|
| Packaging | Box       | VPE length | 352.00 mm |
| VPE width | 162.00 mm | VPE height | 105.00 mm |

**Type tests**

|                               |                |                                                                          |                              |
|-------------------------------|----------------|--------------------------------------------------------------------------|------------------------------|
| Test: Durability of markings  | Standard       | IEC 60068-2-70 / 12.95                                                   |                              |
|                               | Test           | mark of origin, type identification, pitch, durability, stripping length |                              |
|                               | Evaluation     | available                                                                |                              |
| Test: Clampable cross section | Standard       | IEC 60999-1:1999-11 section 9.1, IEC 60947-1:2011-03 section 8.2.4.5.1   |                              |
|                               | Conductor type | Type of conductor and conductor cross-section                            | stranded 2.5 mm <sup>2</sup> |
|                               |                | Type of conductor and conductor cross-section                            | solid 2.5 mm <sup>2</sup>    |
|                               |                | Type of conductor and conductor cross-section                            | stranded 16 mm <sup>2</sup>  |
|                               |                | Type of conductor and conductor cross-section                            | solid 10 mm <sup>2</sup>     |
|                               |                | Type of conductor and conductor cross-section                            | AWG 12/1                     |
|                               |                | Type of conductor and conductor cross-section                            | AWG 12/19                    |
|                               |                | Type of conductor and conductor cross-section                            | AWG 4/1                      |
|                               |                | Type of conductor and conductor cross-section                            | AWG 4/19                     |

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## Technical data

|                                                           |                |                                                   |           |
|-----------------------------------------------------------|----------------|---------------------------------------------------|-----------|
| Test for damage to and accidental loosening of conductors | Evaluation     | passed                                            |           |
|                                                           | Standard       | IEC 60999-1:1999-11 section 9.4 bzw. section 8.10 |           |
|                                                           | Requirement    | 0.7 kg                                            |           |
|                                                           | Conductor type | Type of conductor and conductor cross-section     | H07V-K2.5 |
|                                                           |                | Type of conductor and conductor cross-section     | H07V-U2.5 |
|                                                           |                | Type of conductor and conductor cross-section     | AWG 14/1  |
|                                                           |                | Type of conductor and conductor cross-section     | AWG 14/19 |
|                                                           | Evaluation     | passed                                            |           |
|                                                           | Requirement    | 2.9 kg                                            |           |
|                                                           | Conductor type | Type of conductor and conductor cross-section     | H07V-K16  |
|                                                           |                | Type of conductor and conductor cross-section     | H07V-U16  |
|                                                           | Evaluation     | passed                                            |           |
|                                                           | Requirement    | 4,5 kg                                            |           |
| Pull-out test                                             | Conductor type | Type of conductor and conductor cross-section     | AWG 4/7   |
|                                                           |                | Type of conductor and conductor cross-section     | AWG 4/19  |
|                                                           |                | Type of conductor and conductor cross-section     | AWG 4/7   |
|                                                           |                | Type of conductor and conductor cross-section     | AWG 4/19  |
|                                                           | Standard       | IEC 60999-1:1999-11 section 9.5                   |           |
|                                                           | Requirement    | ≥50 N                                             |           |
|                                                           | Conductor type | Type of conductor and conductor cross-section     | AWG 14/1  |
|                                                           |                | Type of conductor and conductor cross-section     | AWG 14/19 |
|                                                           |                | Type of conductor and conductor cross-section     | H07V-K2.5 |
|                                                           |                | Type of conductor and conductor cross-section     | H07V-U2.5 |
|                                                           | Evaluation     | passed                                            |           |
|                                                           | Requirement    | ≥100 N                                            |           |
|                                                           | Conductor type | Type of conductor and conductor cross-section     | H07V-K16  |
|                                                           |                | Type of conductor and conductor cross-section     | H07V-U16  |
|                                                           | Evaluation     | passed                                            |           |
|                                                           | Requirement    | ≥ 135 N                                           |           |
|                                                           | Conductor type | Type of conductor and conductor cross-section     | AWG 4/7   |
|                                                           |                | Type of conductor and conductor cross-section     | AWG4/19   |
|                                                           | Evaluation     | passed                                            |           |

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**Technical data****Important note**

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IPC conformity | Conformity: The products are developed, manufactured and delivered according international recognized standards and norms and comply with the assured properties in the data sheet resp. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Notes          | <ul style="list-style-type: none"> <li>• Additional variants on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• Wire end ferrule with plastic collar to DIN 46228/4</li> <li>• Wire end ferrule without plastic collar to DIN 46228/1</li> <li>• P on drawing = pitch</li> <li>• Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards.</li> <li>• For all applications with flange we recommend to fix the pin header with the help of the soldering flange or a self-tapping screw on the board.</li> <li>• In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load</li> <li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li> </ul> |

**Classifications**

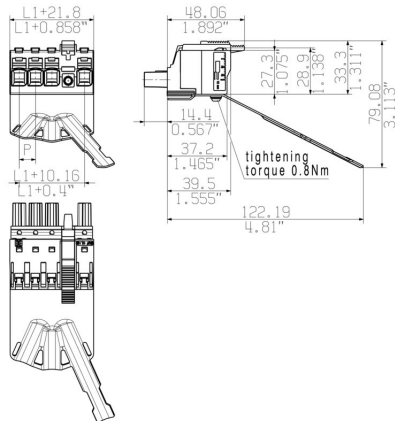
|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 8.0    | EC002638    | ETIM 9.0    | EC002638    |
| ETIM 10.0   | EC002638    | ECLASS 14.0 | 27-46-02-02 |
| ECLASS 15.0 | 27-46-02-02 |             |             |

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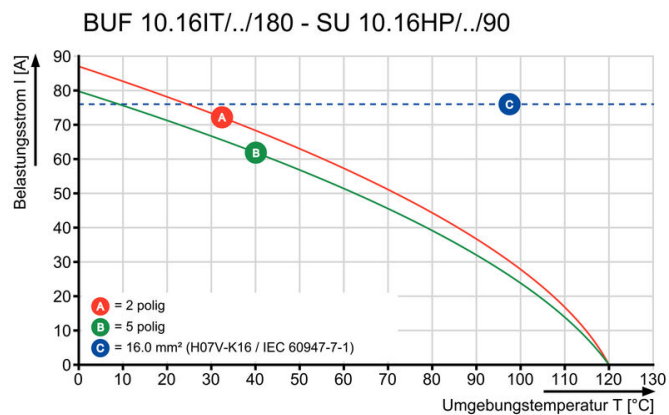
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## Drawings

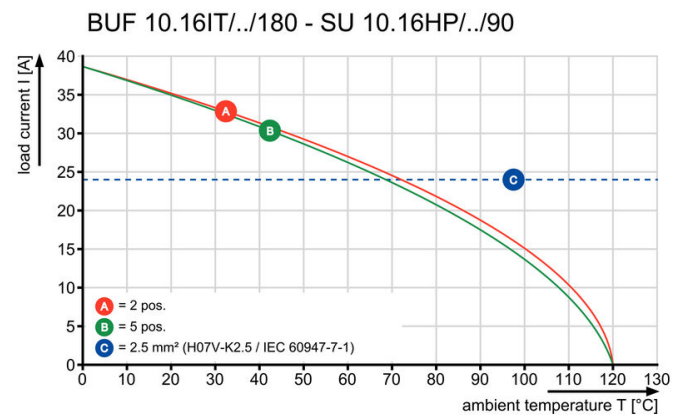


Similar to illustration

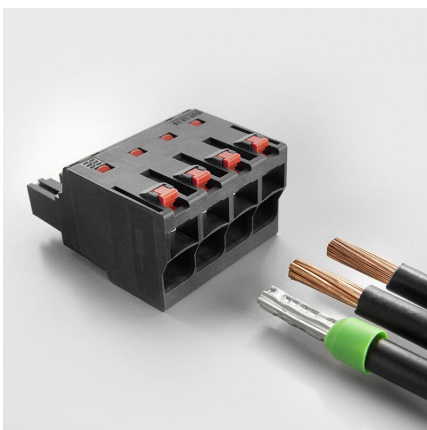
## Graph



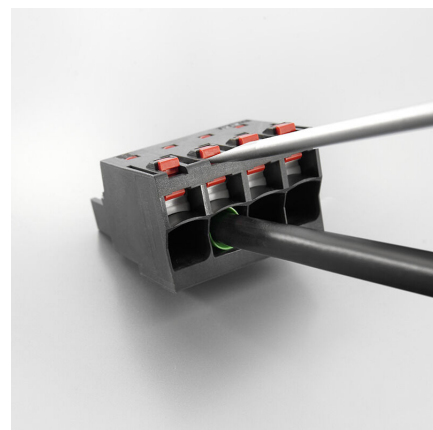
## Graph



## Product benefits



Easy connection of conductors WIRE READY



Quick wiring

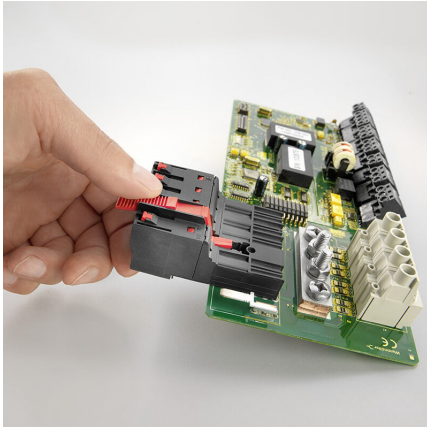
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## Drawings

### Product benefits



Single-handed operation Automatic latching

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**Accessories**
**Coding elements**


The pluggable connections for power electronics - optimised for modern drive technologies, e.g. motor starters, frequency converters and servo-controllers. OMNIMATE Power sets the new standard – with increased safety and innovative solutions such as the pluggable shield, integrated signal contacts and one-handed operation.

The three product lines offer you further advantages:

- Application-oriented scalability: from the compact 4 mm<sup>2</sup> connector for 29 A (IEC) or 20 A (UL) up to the sturdy 16 mm<sup>2</sup> connector for 76 A (IEC) or 54 A (UL)
- Unlimited usage up to 1,000 V (IEC) or 600 V (UL)
- A variety of application optimised mounting options

Our service:

Design your individual connectors simply by using the product configurator.

**General ordering data**

|            |                            |                                                                     |
|------------|----------------------------|---------------------------------------------------------------------|
| Type       | KO BU/SU10.16HP BK         | Version                                                             |
| Order No.  | <a href="#">1824410000</a> | PCB plug-in connector, Accessories, Coding element, black, Number   |
| GTIN (EAN) | 4032248326716              | of poles: 1                                                         |
| Qty.       | 50 ST                      |                                                                     |
| Type       | KO BU/SU10.16HP WT         | Version                                                             |
| Order No.  | <a href="#">2592600000</a> | PCB plug-in connector, Accessories, Coding element, Natural, Number |
| GTIN (EAN) | 4050118717389              | of poles: 1                                                         |
| Qty.       | 50 ST                      |                                                                     |

**Slotted screwdriver**


Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1. ChromTop tip, SoftFinish grip

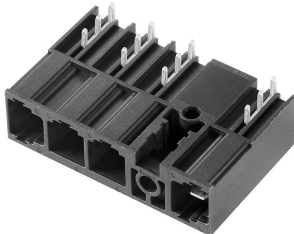
**General ordering data**

|            |                            |                          |
|------------|----------------------------|--------------------------|
| Type       | SDS 0.8X4.5X125            | Version                  |
| Order No.  | <a href="#">9009020000</a> | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248266883              |                          |
| Qty.       | 1 ST                       |                          |

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**Counterpart**
**SU 10.16IT 270MSF**


Male header with middle solder flange fastening in 10.16 pitch for 400-V IT systems according to IEC 61800-5-1. UL approval in compliance with UL840 (600 V) when using leading contact. When used together with the BUZ 10.16 IT, they comply with the expanded requirements for 5.5 mm of touch protection with IT systems (400 V relative to earth), according to IEC 61800-5-1. The middle-flange interlock feature decreases the space required by one pitch width when compared to other standard solutions. Available on request with screw flange or without flange.

**General ordering data**

|            |                            |                                                                      |
|------------|----------------------------|----------------------------------------------------------------------|
| Type       | SU 10.16IT/03/270MSF3 3... | Version                                                              |
| Order No.  | <a href="#">2630230000</a> | PCB plug-in connector, male header, THT solder connection, 10.16     |
| GTIN (EAN) | 4050118633900              | mm, Number of poles: 3, 270°, Solder pin length (l): 3.5 mm, tinned, |
| Qty.       | 42 ST                      | black, Box                                                           |

**SU 10.16IT 90MSF**


Male header with middle solder flange fastening in 10.16 pitch for 400-V IT systems according to IEC 61800-5-1. UL approval in compliance with UL840 (600 V) when using leading contact. When used together with the BUZ 10.16 IT, they comply with the expanded requirements for 5.5 mm of touch protection with IT systems (400 V relative to earth), according to IEC 61800-5-1. The middle-flange interlock feature decreases the space required by one pitch width when compared to other standard solutions. Available on request with screw flange or without flange.

**General ordering data**

|            |                            |                                                                     |
|------------|----------------------------|---------------------------------------------------------------------|
| Type       | SU 10.16IT/03/90MSF3 3.... | Version                                                             |
| Order No.  | <a href="#">2630160000</a> | PCB plug-in connector, male header, THT solder connection, 10.16    |
| GTIN (EAN) | 4050118633832              | mm, Number of poles: 3, 90°, Solder pin length (l): 3.5 mm, tinned, |
| Qty.       | 42 ST                      | black, Box                                                          |